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(NASA-CR-140304) A COMMUNICATION LINK
BETWEEN THE GIM DATA BASE AND A GENERAL
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TECHNICAL MEMORANDUM


Action Document No. 63-0117-4615-20

A COMMUNICATION LINK BETWEEN THE GIM DATA BASE AND A GENERAL APPLICATION PROGRAM

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1.0 BACKGROUND

LEC, via action document 63-0117-4615-20, was requested to establish a communication link between the GIM data base and an application program by May 19, 1972. This task has been successfully completed.

The aforementioned document further specified that the link would be demonstrated by listing on the printer the GIM data so obtained by a program which was not part of GIM.

2.0 METHOD OF LINKING DATA

Utilizing the "Extract" verb of GIM (For a more detailed description of this verb see Houston Area Test Site (HATS) Sample Inventory Data Base - CAD Document #CAD1938 and GIM USER'S MANUAL, TRW, Document #3181-C). This causes the requested information, in this case the UTM numbers for Harris County to be extracted from the GIM base and written on to tape.

When the GIM extract has completed, a Fortran program is then compiled and executed. This program reads the tape generated by GIM, formats and prints the extracted data on the line printer. When an end of file on the extracted tape is encountered the job is terminated.

3.0 REQUIRED PERIPHERAL EQUIPMENT & CONTROL CARDS

The following is a tabularization of the required, control cards and their use:

- (a) @RUN,/R WALECH4,4699A-DØ18-P,DMS
Run card required for initiation of 1108 job.
- (b) @QUAL DMS
Qualifier for files discription for GIM files.
- (c) @ASG,AX *GIM
Tape assignment-required for GIM run.
- (d) @ADD *GIM.RUN
Required for execution of GIM.
- (e) REQUEST 290000
Required for GIM run.
- (f) GASSN T1"ASG,T A*TEST'
Tape assignment for the GIM extract.
- (g) Extract only each HATSF with country '101000'#.
- (h) SIGNOFF
Close GIM System.
- (i) @REWIND A*TEST.
FUR/PUR command to rewind data tape to load point.
- (j) @USE 1.,A*TEST
Use command for linking of internal & external files
- (k) @FØR,IL MAIN
Fortran processor call
:
:
Fortran source statements
:
:
End

- (1) @XQT
Excute program
- (m) @FIN
Return control to X8 executive

4.0 INPUT/OUTPUT DESCRIPTION

The format of the data so retrieved from the GIM system is unblocked records of 4 words.

There are 467 such records (UTM grid numbers) in the HATSF file.

Each record has the following octal format:

WD1: 7735000000aa-where 7735 is a GIM code for a valid record generation-and aa is an octal count of the record length in characters, less this control word.

WD2:000000000bb-where bbb is the record number for this extract one

WD3:236165273111-1st word of data-N15RTD in field data code, where 'N' is a GIM generated value, and means new data (as opposed to propogated value-which would then be a 'P')-15RTD is the 1st half of the UTM grid number

WD4:716561650503-Data word 2-951bb-in field data code-where the 9515 is the 2nd half of the UTM grid number, and the word is blank padded.

This data would be reformated by the Fortran application pro-

gram and written as:

RECLLEN=4 RECNO=bbb N15RTD9515

5.0 TIMING

The combined GIM extraction process, the compiling, collecting, execution, and printing of the application program (no discreet figures are available) took 1 minute and 8 seconds. There are 467 records on tape, and the Fortran program is comprized of 18 symbolic statements.

6.0 OBSERVATIONS

Although the application program described herein is relatively simple, the technique employed, that of extracting information from the GIM data base, and subsequently storing it on an external file, processing it with a "stand alone" program, is completely general, thereby establishing a concrete data communication link with the GIM data base, and any user program.

7.0 LISTINGS & DECKS

A Listing and a Deck will be supplied upon request by contacting Bill Argo or Jim Allison at 488-0080/X411